BEDROCK AND SURFICIAL GEOLOGY
REXTON, NEW BRUNSWICK

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J.L. Davies and A.A. Seaman

INTRODUCTION

This work was carried out at the request of the New Brunswick Department of Municipal Affairs. The village of Rexton is in low rolling ter[illegible] on the New Brunswick coastal plain. The village is situated on both sides of the submerged valley of the Richibucto River (about 8 km from Northumberland Strait) along Highway 11 approximately 70 km north of Moncton. The field investigation was carried out during the summer of 1982.

BEDROCK GEOLOGY

Rexton is located in a region underlain by relatively undisturbed fluviatile Carboniferous sedimentary rocks. Geological mapping has only been carried out on a broad scale, and most of the rock data has been obtained by the Carboniferous Drilling Program (Ball et al, 1981).

In the village of Rexton bedrock is covered by regolith at least 2.5 m thick. The only exposures seen were along the river east of the Richibucto River bridge, in an excavation near the Rexton Nursing Home, and west of the village along Highway 495.

The bedrock is horizontally bedded, pale greenish grey, friable lithic sandstone. The rock is soft and a back-hoe has no difficulty in excavating to depths of 4 to 5 m. Two vertical drill holes were put down by the N.B. Mineral Resources Division (Ball, et al, 1981) within the village limits. Hole 1094, drilled south of the Richibucto River and west of Highway 11 (see sketch), encountered lithic sandstone with traces of coal overlying intercalated polymictic conglomerate and lithic sandstone to a depth of 25 m. The final depth of this hole was 305 m (1001 feet). Hole 108 was drilled north of the Richibucto River and west of Highway 11. It intersected lithic sandstone with traces of coal to a depth of 12 meters, followed by 3 meters of 10% coal intercalated with calcareous quartzose sandstone. The total depth of hole 108 was 122 meters (401 feet).

Ball et al (1981) indicate a northeasterly trending fault southwest of Rexton. If this structure is indeed a fault its trace can be projected through Rexton where the topographic expression is the Richibucto River.

SURFICIAL GEOLOGY

The surficial geology of the area within which the village of Rexton lies has been mapped on a regional scale (1: 250,000) by Rampton and Paradis (1981). They indicate that the area to the south of the Richibucto River consists primarily of rock at, or very close to, the surface, while the area to the north of the river, excluding the area of the Plaine de St.

Charles bog, consists of a blanket of marine sand, generally 0.5 to 1.5 m thick, overlying till or bedrock.

Observations indicate, however, that the surficial materials on both sides of the river are very similar, within the area of the village. In general, the bedrock appears to lie within 1 m of the surface, though water-well data (Department of the Environment files) indicates that it may locally lie at depths of 1.5 to 2 m. The overburden consists predominantly of weathered sandstone composed of sand and angular sandstone fragments, locally overlain, or replaced by, a dense, reddish-brown, clayey sand till. Close to the river, these materials, or bedrock, may have a veneer of marine sand, with a maximum observed thickness of 0.7 m. Along the river, modern significantly thicker beach and bar sands are present.

There are no important surficial aggregate resources within the village area. The marine sand veneer is too thin to be of economic significance, and Quarriable Substances Act regulations prohibit exploitation of shoreline deposits. Several small pits have been developed in the weathered sandstone just outside of the southern limits of the village. However, Department of Transportation testing of material of this type indicates that it is of very poor quality, and is suitable only for fill.

Portions of the Plaine de St. Charles peat bog are being developed for production of horticultural peat. However, Airphoto Analysis Associates Consultants Ltd. (1975) indicate that the potential of that portion of the bog within the village limits is very limited.

REFERENCES

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Note: Map Plate 83-42 to accompany report